

SEQUENCE LISTING



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Larsen, Jorgen N.

<120> RECOMBINANT PROTEIN VARIANTS

<130> 04305/100M237-US1

<140> US 10/698,855

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<150> US 60/422,983

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<160> 10

<170> PatentIn version 3.1

<210> 1

<211> 158

<212> PRT

<213> Malus x domestica

<400> 1

Gly Val Tyr Thr Tyr Glu Asn Glu Tyr Thr Ser Glu Ile Pro Pro Pro
1 5 10 15

Arg Leu Phe Lys Ala Phe Val Leu Asp Ala Asp Thr Leu Ile Pro Gln
20 25 30

Ile Ala Pro Gln Ala Ile Lys His Ala Glu Ile Leu Ser Gly Asp Gly
35 40 45

Gly Pro Gly Thr Ile Lys Lys Ile Thr Phe Gly Glu Gly Ser Gln Tyr
50 55 60

Gly Tyr Val Lys His Lys Ile Asp Ser Val Asp Glu Ala Asn Tyr Ser
65 70 75 80

Tyr Ala Tyr Thr Leu Ile Glu Gly Asp Ala Leu Thr Asp Thr Ile Glu
85 90 95

Lys Val Ser Tyr Glu Thr Lys Leu Val Ala Ser Gly Ser Gly Ser Ile
100 105 110

Ile Lys Ser Ile Ser His Tyr His Thr Lys Gly Asp Val Glu Ile Met
115 120 125

Glu Glu His Val Lys Ala Gly Lys Glu Lys Ala His Gly Leu Phe Lys
130 135 140

Leu Ile Glu Ser Tyr Leu Lys Asp His Pro Asp Ala Tyr Asn
145 150 155

<210> 2
<211> 158
<212> PRT
<213> Malus x domestica

<400> 2

Gly Val Tyr Thr Tyr Glu Asn Glu Tyr Thr Ser Glu Ile Pro Pro Pro
1 5 10 15

Arg Leu Phe Lys Ala Phe Val Leu Asp Ala Asp Asn Leu Ile Pro Lys
20 25 30

Ile Ala Pro Gln Ala Ile Lys His Ala Glu Asn Ile Glu Gly Asn Gly
35 40 45

Gly Pro Gly Thr Ile Lys Lys Ile Thr Phe Gly Glu Gly Ser Gln Tyr
50 55 60

Lys Tyr Val Lys His Arg Ile Asp Ser Val Asp His Ala Asn Tyr Ser
65 70 75 80

Tyr Ala Tyr Thr Leu Ile Glu Gly Asp Ala Leu Thr Asp Thr Ile Glu
85 90 95

Lys Val Ser Tyr Glu Thr Lys Leu Val Ala Ser Gly Ser Gly Ser Ile
100 105 110

Ile Lys Ser Ile Ser His Tyr His Thr Lys Gly Asp Val Glu Ile Met
115 120 125

Glu Glu His Val Lys Ala Gly Lys Glu Lys Ala His Gly Leu Phe Lys
130 135 140

Leu Ile Glu Ser Tyr Leu Lys Asp His Pro Asp Ala Tyr Asn
145 150 155

<210> 3
<211> 159
<212> PRT
<213> Malus x domestica

<400> 3

Gly Val Tyr Thr Tyr Glu Asn Glu Tyr Thr Ser Val Ile Pro Pro Ala
1 5 10 15

Arg Leu Phe Lys Ala Phe Val Leu Asp Ala Asp Asn Leu Ile Pro Lys
2

20 25 30
 Ile Ala Pro Gln Ala Ile Lys His Ala Glu Ile Leu Glu Gly Asp Gly
 35 40 45
 Gly Pro Gly Thr Ile Lys Lys Ile Thr Phe Gly Glu Gly Ser Gln Tyr
 50 55 60
 Gly Tyr Val Lys His Lys Ile Asp Ser Val Asp Glu Ala Asn Tyr Ser
 65 70 75 80
 Tyr Ala Tyr Thr Leu Ile Glu Gly Asp Ala Leu Thr Asp Thr Ile Glu
 85 90 95
 Lys Val Ser Tyr Glu Thr Lys Leu Val Ala Thr Pro Asp Gly Gly Ser
 100 105 110
 Ile Ile Lys Ser Ile Ser His Tyr His Thr Lys Gly Asp Val Glu Ile
 115 120 125
 Met Glu Glu His Val Lys Ala Gly Lys Glu Lys Ala His Gly Leu Phe
 130 135 140
 Lys Leu Ile Glu Ser Tyr Leu Leu Asp His Ser Asp Ala Tyr Asn
 145 150 155

<210> 4
 <211> 158
 <212> PRT
 <213> Arabidopsis thaliana

<400> 4

Gly Ala Gln Ser His Ser Leu Glu Ile Thr Ser Ser Val Ser Ala Glu
 1 5 10 15
 Lys Ile Phe Ser Gly Ile Val Leu Asp Val Asp Thr Val Ile Pro Lys
 20 25 30
 Ala Ala Thr Gly Ala Tyr Lys Ser Val Glu Val Lys Gly Asp Gly Gly
 35 40 45
 Ala Gly Thr Val Arg Ile Ile Thr Leu Pro Glu Gly Ser Pro Ile Thr
 50 55 60
 Thr Met Thr Val Arg Thr Asp Ala Val Asn Lys Glu Ala Leu Ser Tyr
 65 70 75 80
 Asp Ser Thr Val Ile Asp Gly Asp Ile Leu Leu Gly Phe Ile Glu Ser
 85 90 95

Ile Glu Thr His Met Val Val Val Pro Thr Ala Asp Gly Gly Ser Ile
100 105 110

Thr Lys Thr Thr Ala Ile Phe His Thr Lys Gly Asp Ala Val Val Pro
115 120 125

Glu Glu Asn Ile Lys Phe Ala Asp Ala Gln Asn Thr Ala Leu Phe Lys
130 135 140

Ala Ile Glu Ala Tyr Leu Ile Ala Asn Ser Asp Ala Tyr Asn
145 150 155

<210> 5
<211> 159
<212> PRT
<213> Betula pendula

<400> 5

Gly Val Phe Asn Tyr Glu Thr Glu Thr Thr Ser Val Ile Pro Ala Ala
1 5 10 15

Arg Leu Phe Lys Ala Phe Ile Leu Asp Gly Asp Asn Leu Phe Pro Lys
20 25 30

Val Ala Pro Gln Ala Ile Ser Ser Val Glu Asn Ile Glu Gly Asn Gly
35 40 45

Gly Pro Gly Thr Ile Lys Lys Ile Ser Phe Pro Glu Gly Leu Pro Phe
50 55 60

Lys Tyr Val Lys Asp Arg Val Asp Glu Val Asp His Thr Asn Phe Lys
65 70 75 80

Tyr Asn Tyr Ser Val Ile Glu Gly Gly Pro Ile Gly Asp Thr Leu Glu
85 90 95

Lys Ile Ser Asn Glu Ile Lys Ile Val Ala Thr Pro Asp Gly Gly Ser
100 105 110

Ile Leu Lys Ile Ser Asn Lys Tyr His Thr Lys Gly Asp His Glu Val
115 120 125

Lys Ala Glu Gln Val Lys Ala Ser Lys Glu Met Gly Glu Thr Leu Leu
130 135 140

Arg Ala Val Glu Ser Tyr Leu Leu Ala His Ser Asp Ala Tyr Asn
145 150 155

<210> 6
<211> 153
<212> PRT
<213> Arabidopsis thaliana

<400> 6

Gly Ala Gln Ser His Ser Leu Glu Ile Thr Ser Ser Val Ser Ala Glu
1 5 10 15

Lys Ile Phe Ser Gly Ile Val Leu Asp Val Asp Thr Val Ile Pro Lys
20 25 30

Ala Ala Thr Gly Ala Tyr Lys Ser Val Glu Val Lys Gly Asp Gly Gly
35 40 45

Ala Gly Thr Val Arg Ile Ile Thr Leu Pro Glu Gly Ser Pro Ile Thr
50 55 60

Thr Met Thr Val Arg Thr Asp Ala Val Asn Lys Glu Ala Leu Ser Tyr
65 70 75 80

Asp Ser Thr Val Ile Asp Gly Asp Ile Leu Leu Gly Phe Ile Glu Ser
85 90 95

Ile Glu Thr His Met Val Val Val Pro Thr Ala Asp Gly Gly Ser Ile
100 105 110

Thr Lys Thr Thr Ala Ile Phe His Thr Lys Gly Asp Ala Val Val Pro
115 120 125

Glu Glu Asn Ile Lys Phe Ala Asp Ala Gln Asn Thr Ala Leu Phe Lys
130 135 140

Ala Ile Glu Ala Tyr Leu Ile Ala Asn
145 150

<210> 7
<211> 125
<212> PRT
<213> Lepidoglyphus destructor

<400> 7

Gly Lys Met Thr Phe Lys Asp Cys Gly His Gly Glu Val Thr Glu Leu
1 5 10 15

Asp Ile Ser Gly Cys Ser Gly Asp Thr Cys Val Ile His Arg Gly Gln
20 25 30

Lys Met Thr Leu Asp Ala Lys Phe Ala Ala Asn Gln Asp Thr Asn Lys
5

35

40

45

Val Thr Ile Lys Val Leu Ala Lys Val Ala Gly Thr Thr Ile Gln Val
50 55 60

Pro Gly Leu Glu Thr Asp Gly Cys Lys Val Leu Lys Cys Pro Ile Lys
65 70 75 80

Lys Gly Glu Ala Leu Asp Phe Asn Tyr Gly Met Thr Ile Pro Ala Ile
85 90 95

Thr Pro Lys Ile Lys Ala Asp Val Thr Ala Glu Leu Val Gly Asp His
100 105 110

Gly Val Met Ala Cys Gly Thr Ile His Gly Gln Val Glu
115 120 125

<210> 8

<211> 129

<212> PRT

<213> Dermatophagoides pteronyssinus

<400> 8

Asp Gln Val Asp Val Lys Asp Cys Ala Asn His Glu Ile Lys Lys Val
1 5 10 15

Leu Val Pro Gly Cys His Gly Ser Glu Pro Cys Ile Ile His Arg Gly
20 25 30

Lys Pro Phe Gln Leu Glu Ala Val Phe Glu Ala Asn Gln Asn Thr Lys
35 40 45

Thr Ala Lys Ile Glu Ile Lys Ala Ser Ile Asp Gly Leu Glu Val Asp
50 55 60

Val Pro Gly Ile Asp Pro Asn Ala Cys His Tyr Met Lys Cys Pro Leu
65 70 75 80

Val Lys Gly Gln Gln Tyr Asp Ile Lys Tyr Thr Trp Asn Val Pro Lys
85 90 95

Ile Ala Pro Lys Ser Glu Asn Val Val Val Thr Val Lys Val Met Gly
100 105 110

Asp Asp Gly Val Leu Ala Cys Ala Ile Ala Thr His Ala Lys Ile Arg
115 120 125

Asp

<210> 9
 <211> 158
 <212> PRT
 <213> Malus x domestica

<400> 9

Gly Val Tyr Thr Tyr Glu Asn Glu Tyr Thr Ser Glu Ile Pro Pro Pro
 1 5 10 15

Arg Leu Phe Lys Ala Phe Val Leu Asp Ala Asp Asn Leu Ile Pro Lys
 20 25 30

Ile Ala Pro Gln Ala Ile Lys His Ala Glu Ile Leu Glu Gly Asp Gly
 35 40 45

Gly Pro Gly Thr Ile Lys Lys Ile Thr Phe Gly Glu Gly Ser Gln Tyr
 50 55 60

Gly Tyr Val Lys His Lys Ile Asp Ser Val Asp Glu Ala Asn Tyr Ser
 65 70 75 80

Tyr Ala Tyr Thr Leu Ile Glu Gly Asp Ala Leu Thr Asp Thr Ile Glu
 85 90 95

Lys Val Ser Tyr Glu Thr Lys Leu Val Ala Ser Gly Ser Gly Ser Ile
 100 105 110

Ile Lys Ser Ile Ser His Tyr His Thr Lys Gly Asp Val Glu Ile Met
 115 120 125

Glu Glu His Val Lys Ala Gly Lys Glu Lys Ala His Gly Leu Phe Lys
 130 135 140

Leu Ile Glu Ser Tyr Leu Lys Asp His Pro Asp Ala Tyr Asn
 145 150 155

<210> 10
 <211> 125
 <212> PRT
 <213> Glycyphagus domesticus

<400> 10

Gly Lys Met Lys Phe Lys Asp Cys Gly Lys Gly Glu Val Thr Glu Leu
 1 5 10 15

Asp Ile Thr Asp Cys Ser Gly Asp Phe Cys Val Ile His Arg Gly Lys
 20 25 30

Pro Leu Thr Leu Glu Ala Lys Phe Ala Ala Asn Gln Asp Thr Thr Lys
35 40 45

Ala Thr Ile Lys Val Leu Ala Lys Val Ala Gly Thr Pro Ile Gln Val
50 55 60

Pro Gly Leu Glu Thr Asp Gly Cys Lys Phe Val Lys Cys Pro Ile Lys
65 70 75 80

Lys Gly Asp Pro Ile Asp Phe Lys Tyr Thr Thr Thr Val Pro Ala Ile
85 90 95

Leu Pro Lys Val Lys Ala Glu Val Thr Ala Glu Leu Val Gly Asp His
100 105 110

Gly Val Leu Ala Cys Gly Arg Phe Gly Arg Gln Val Glu
115 120 125